RI061380F

TECHNICAL MEMORANDUM

Beede Waste Oil
2.02
SDMS# 256669

NON-TIME-CRITICAL REMOVAL ACTION

BEEDE WASTE OIL SITE
PLAISTOW, NEW HAMPSHIRE

RESPONSE ACTION CONTRACT (RAC), REGION I

For
U.S. Environmental Protection Agency

By
Tetra Tech NUS, Inc.

EPA Contract No. 68-W6-0045
EPA Work Assignment No. 105-NARV-011T
TtNUS Project No. GN4103

August 2006

TETRA TECH NUS, INC.

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Diane M. Baxter
Project Manager

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Program Manager

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1.0 INTRODUCTION

This Technical Memorandum presents a summary of Non-Time-Critical Removal Action (NTCRA) activities that have occurred at the Beede Waste Oil Site (the site) since the shut down of the NTCRA vacuum enhanced oil extraction system. Tetra Tech NUS (TtNUS) prepared this memorandum at the request of the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W6-0045, Work Assignment No. 105-NARV-011T.

The NTCRA treatment system, comprised of a vacuum enhanced oil extraction system and a passive oil interceptor trench, was operated at the site from February 2000 through September 2005 and recovered approximately 90,000 gallons of oil from the subsurface during that time.

EPA determined in September of 2005 that operation of the NTCRA on-site vacuum enhanced oil extraction system should be discontinued as soon as practicable in the fall of 2005, and at the same time the existing LNAPL interceptor trench should be extended eastward by up to 80 feet (ft) to better ensure capture of any residual mobile LNAPL that could migrate from the site to the adjacent Kelley Brook wetlands. EPA also concluded that the oil interceptor trench should continue to be monitored, maintained, and skimmed of oil, as necessary, until the planned remedial action for the site is implemented. This technical memorandum presents a summary of significant NTCRA activities conducted at the site from the time of the vacuum extraction system shutdown, September 30, 2005, through August 2006.

This Technical Memorandum contains four sections: Section 1.0 is this introduction; Section 2.0 describes the extension of the oil interceptor trench; Section 3 describes the final oil thickness monitoring event conducted at the site in August 2006. Section 4.0 presents a summary of operations and maintenance activities conducted after shut down of the vacuum extraction system.

2.0 EXTENSION OF OIL INTERCEPTOR TRENCH

The existing oil interceptor trench is located along the northern edge of the site, immediately upgradient of the Kelley Brook wetlands. The original 100 foot-length of trench was installed in October 1997 to address an active oil outbreak from the site into the adjacent wetlands. The trench was extended 24 feet (ft) in November 1999, during construction of the NTCRA vacuum

extraction system, to stop potential continuing seepage into the wetlands immediately west of the original trench. After 1999, the trench and the NTCRA vacuum extraction system effectively contained further migration the LNAPL plume into the wetlands. However, EPA determined that because the operation of the NTCRA vacuum extraction system would be discontinued in the fall of 2005, the interceptor trench should be extended eastward up to 80 ft to better ensure capture of any residual mobile LNAPL that could migrate from the site into the wetlands.

TtNUS designed and prepared construction specifications for the trench extension and procured a subcontractor (Maverick Construction Management Services) to construct the extension. Trench construction commenced on January 24, 2006 and was completed on January 31, 2006. Site restoration activities were completed on February 8, 2006.

The trench extension originated at the west end of the existing trench and extends 64 ft ~~west~~east ward. The trench is constructed of pre-cast concrete galley structures laid end to end in an excavated trench to form a continuous channel. An impermeable membrane is installed along the downgradient side of the trench to prevent LNAPL migration beyond the trench. Each galley section has dimensions of 8 ft long by 4 ft wide by 4 ft high, perforated sides, and a large opening at each end (except the end sections, which have one closed end). The trench extension was designed and constructed to match the design and elevations of the existing trench. The existing trench and trench extension are shown on Figures 1 and 2. Trench construction details are shown on Figure 3.

The final length of the trench was determined during construction, based on observation of oil seepage along the sidewalls of the trench. Excavation began at the end of the existing trench and extended ~~west~~east ward in 8 to 16 foot increments. Galley chambers were placed after each excavation increment was completed and evaluated for the presence of oil. Heavy oil was visible in the trench excavation from the start of the extension through approximately 40 ft ~~west~~east ward. No apparent oil was observed in the bottom or sides of the excavation after 42 ft. The trench was extended 64 ft to ensure complete capture of the LNAPL plume.

Site preparation and restoration activities performed to facilitate construction of the trench extension included removing and replacing sections of the site's perimeter (chain link) fence, clearing vegetation, moving and restoring a portion of a soil stockpile adjacent to the trench to allow access to the work area, and general grading of the work area to facilitate construction.

During stockpile moving and grading activities, contaminated soil was observed in an approximately 10 ft by 20 ft area beneath the soil stockpile and access ramp. Additional excavation was not conducted, beyond that required for construction access to the trench area, to investigate the complete extent of the contaminated soil. The contaminated soil was grey in color and had a strong petroleum odor. A sample of the contaminated soil was collected, placed in a sample jar, and allowed to warm to room temperature in the site trailer. Jar-headspace VOCs screening was performed on the sample using a photo ionization detector (PID) inserted into the airspace of the jar, above the soils. The maximum PID reading was 25.7 ppm. No samples were sent off site for laboratory analysis.

Prior to restoring the access ramp area to its original grade and moving the stockpiled soils back to their original location, the contaminated soil area was covered with a sheet of 6 millimeter thick polyethylene approximately 25 ft wide by 75 ft long. The area was then restored to pre-construction conditions. The approximate location and extent of the observed contaminated soil and the extent of the polyethylene sheeting are shown on Figure 2.

3.0 OIL THICKNESS MEASUREMENT AUGUST 2006

An oil thickness monitoring event was conducted on August 22, 2006 to determine how much oil is present in the NTCRA vacuum extraction wells and whether there was a significant change in oil presence and thickness since the operation of the NTCRA extraction system was discontinued in September 2005. Thickness monitoring data are presented on Table 1. A contour figure showing the estimated extent and measured thickness of oil is presented in Appendix A.

Comparison of the August 2006 oil thickness data with thickness data collected in earlier periods indicates that the aerial extent of the plume has not changed significantly since the extraction system was discontinued. The outer extent of the plume and the number of wells containing measurable oil has remained approximately the same since May 2005, the last high water table period before shutdown of the extraction system. The number of wells containing measurable oil was 79 in May 2005 and 80 in August 2006.

The measured oil thickness in many of the wells has increased since system operations ceased. However, this change is consistent with the expected behavior of LNAPL in the subsurface.

The measured oil thickness in individual extraction wells often varies due to changes in water table elevation. In general, the measured oil thickness in the wells is greatest when the groundwater elevation is low and least when the groundwater elevation is high. This phenomenon was consistently observed in the NTCRA extraction wells while the extraction system was in operation. However, if oil is not evacuated from the extraction well after a low groundwater elevation period, the oil thickness does not follow this pattern. Instead the oil that entered the well during the low water period remains in the well as the water table rises and falls because it lacks the hydraulic pressure needed to flow back into the subsurface materials. Over time, additional oil (beyond that expected at the low water period) may accumulate in the well as the thick column of oil depresses the water surface in the well, allowing more oil to enter from the surrounding area. As a result, the oil thickness in the monitoring wells after a significant period of no oil extraction is expected to be greater than the thickness at the beginning of the extraction system shut-down period. Further, the oil thickness in the wells is likely to be greater than the thickness that would be expected at the lowest groundwater elevation measured during the shut down period. This difference in oil-thickness in the wells does not reflect a change in oil thickness in the subsurface. Rather, the increased oil thickness in the wells represents an increased exaggeration of the actual mobile oil thickness in the subsurface.

4.0 OPERATIONS AND MAINTENANCE ACTIVITIES

TtNUS performed various operations and maintenance activities at the site during the period after operation of the vacuum extraction system was discontinued, through August 2006. This section summarizes the significant activities performed during this period.

Shutdown of the vacuum-enhanced oil extraction system – Shutdown of the vacuum extraction system was performed as recommended in the shutdown evaluation Technical Memorandum (TtNUS, December 2005). Major activities included disconnecting fluid transfer lines between the extraction system and storage tanks, disconnecting and sealing system extraction wells, decontaminating and removing the water storage tank from the site, disposing of all solid wastes generated by system shutdown or previous NTCRA operation activities, and disposing of liquid wastes generated during system shutdown and water storage tank decontamination. All wastes were disposed off site at appropriately permitted facilities.

Routine inspection and maintenance of NTCRA system components – TtNUS performed bi-weekly inspection and maintenance of the NTCRA vacuum extraction units and other system components to ensure that the vacuum enhanced extraction system remains in good working condition during the shutdown period and is available for future use within a 2 to 4 week time period, if necessary. Bi-weekly maintenance of each of the vacuum units included starting the system and running it until it reached normal operation temperature, inspecting system components, and maintaining the equipment as needed. The exterior components of the NTCRA system (pipes and wells) as well as other site features such as soil stockpile covers were also inspected and repaired as needed. No significant repairs were needed during the monitoring period.

Operation and maintenance of the oil interceptor trench – TtNUS regularly inspected the oil interceptor trench to observe oil accumulation in the trench and determine whether oil removal was necessary. Initially the trench was monitored on a weekly basis. The monitoring frequency was decreased to approximately every 2 weeks based on the observed low rate of oil accumulation. Very little oil (a sheen) accumulated in the interceptor trench during the eleven month monitoring period. No oil removal was conducted during the monitoring period because the oil did not accumulate to a thickness that would allow efficient recovery (approximately $1/8^{th}$ inch).

During site visits to inspect the interceptor trench, the wetlands adjacent to the trench were monitored for signs of oil seepage or accumulation. No oil seepage or accumulation of oil was observed.

Site maintenance - Routine maintenance of the site included snow plowing and sanding as needed during the winter to keep the site parking lot and access road to the NTCRA treatment system building passable. Additionally, clearing of vegetation around the interceptor trench and NTCRA system piping was conducted as needed during the growing season to maintain safe access and ensure that the piping and wells were not damaged by brush or trees. Plowing, sanding, and clearing were performed by a landscaping subcontractor.

A list of the vendors used for site operations and maintenance activities, and representative characterization data for wastes disposed off site are included in Appendix B.

TABLES

TABLE

TABLE 1
OIL THICKNESS MONITORING AUGUST 2006
TECHNICAL MEMORANDUM
BEEDE WASTE OIL SITE
PLAISTOW, NEW HAMPSHIRE

Extraction Well ID	Total Well Depth (ft)	Depth to Oil (ft)	Depth to Water (ft)	Oil Thickness (ft)
	Date: 08/02/2006			
EW-01	25.80	20.62	20.62	0.00
EW-02	20.00	14.50	14.55	0.05
EW-03	17.00	12.10	12.20	0.10
EW-04	17.00	11.70	11.70	0.00
EW-05	16.90	12.30	12.30	0.00
EW-06	25.20	20.90	20.90	0.00
EW-07	25.50	20.80	20.85	0.05
EW-08	19.00	13.30	13.30	0.00
EW-09	16.90	11.50	11.50	0.00
EW-10	17.60	11.05	11.10	0.05
EW-11	25.60	21.20	21.20	0.00
EW-12	25.50	20.50	21.00	0.50
EW-13	23.50	17.09	17.10	0.01
EW-14	24.90	20.90	21.00	0.10
EW-15	24.60	22.05	22.05	0.00
EW-16	24.70	21.00	24.70	3.70
EW-17	26.00	21.20	21.60	0.40
EW-18	25.40	20.05	20.50	0.45
EW-19	25.20	18.85	20.60	1.75
EW-20	26.10	19.40	19.40	0.00
EW-21	25.80	20.90	20.95	0.05
EW-22	25.80	20.10	20.80	0.70
EW-23	24.90	22.00	22.30	0.30
EW-24	25.30	20.90	20.90	0.00
EW-25	25.30	21.10	22.00	0.90
EW-26	26.20	20.91	22.80	1.89
EW-27	26.60	21.70	21.70	0.00
EW-28	25.70	21.80	21.80	0.00
EW-29	26.80	21.90	22.00	0.10
EW-30	26.40	22.15	22.20	0.05
EW-31	26.50	21.70	22.10	0.40
EW-32	25.60	21.52	21.81	0.29
EW-33	25.50	21.10	21.20	0.10
EW-34	24.70	21.50	21.50	0.00
EW-35	26.30	21.70	21.70	0.00
EW-36	31.60	26.40	26.60	0.20
EW-37	31.60	26.30	26.45	0.15
EW-38	26.40	21.94	24.80	2.86
EW-39	26.40	21.75	22.00	0.25
EW-40	25.20	20.90	20.92	0.02
EW-41	25.50	23.10	23.10	0.00

TABLE 1 (cont.)
OIL THICKNESS MONITORING AUGUST 2006
TECHNICAL MEMORANDUM
BEEDE WASTE OIL SITE
PLAISTOW, NEW HAMPSHIRE

Extraction Well ID	Total Well Depth (ft)	Depth to Oil (ft)	Depth to Water (ft)	Oil Thickness (ft)
	Date: 08/02/2006			
EW-42	25.50	22.10	22.10	0.00
EW-43	26.10	22.15	22.30	0.15
EW-44	25.70	22.00	23.52	1.52
EW-45	26.20	21.82	23.30	1.48
EW-46	26.30	22.60	22.60	0.00
EW-47	25.60	22.80	22.80	0.00
EW-48	26.40	22.30	22.30	0.00
EW-49	26.80	22.50	22.50	0.00
EW-50	16.60	11.20	11.20	0.00
EW-51	15.70	9.00	9.00	0.00
EW-52	15.90	9.20	9.20	0.00
EW-53	18.40	12.20	12.20	0.00
EW-54	16.40	9.50	9.50	0.00
EW-55	16.20	10.00	10.00	0.00
EW-56	18.50	11.30	12.70	1.40
EW-57	25.60	17.30	17.30	0.00
EW-58	21.90	14.00	14.00	0.00
EW-59	26.00	23.80	23.81	0.01
EW-60	30.00	23.35	23.35	0.00
EW-61	25.90	23.45	23.45	0.00
EW-62	26.70	23.75	23.75	0.00
EW-63	26.60	23.70	23.80	0.10
EW-64	26.20	23.20	23.20	0.00
EW-65	26.40	23.65	23.66	0.01
EW-66	26.20	24.00	24.10	0.10
EW-67	26.30	23.65	23.80	0.15
EW-68	26.80	24.05	24.10	0.05
EW-69	30.60	24.60	24.60	0.00
EW-70	27.10	23.85	23.85	0.00
EW-71	26.10	23.85	23.85	0.00
EW-72	26.70	24.08	24.08	0.00
EW-73	26.30	23.33	23.33	0.00
EW-74	30.30	23.85	23.85	0.00
EW-75	26.30	23.40	23.41	0.01
EW-76	26.20	23.25	23.25	0.00
EW-77	27.70	24.80	24.81	0.01
EW-78	30.60	24.75	24.75	0.00
EW-79	30.70	22.00	23.95	1.95
EW-80	30.90	24.00	24.00	0.00
EW-81	30.50	24.20	24.70	0.50
EW-82	27.10	23.00	24.90	1.90

TABLE 1 (cont.)
OIL THICKNESS MONITORING AUGUST 2006
TECHNICAL MEMORANDUM
BEEDE WASTE OIL SITE
PLAISTOW, NEW HAMPSHIRE

Extraction Well ID	Total Well Depth (ft)	Depth to Oil (ft)	Depth to Water (ft)	Oil Thickness (ft)
	Date: 08/02/2006			
EW-83	30.30	23.65	23.65	0.00
EW-84	30.20	24.80	24.85	0.05
EW-85	30.00	24.80	25.05	0.25
EW-86	26.30	21.40	22.00	0.60
EW-87	26.70	20.20	22.20	2.00
EW-88	24.60	22.95	22.95	0.00
EW-89	28.00	22.50	22.50	0.00
EW-90	29.30	24.60	27.80	3.20
EW-91	29.90	24.00	24.05	0.05
EW-92	29.30	23.95	23.95	0.00
EW-93	28.90	23.00	23.20	0.70
EW-94	28.80	22.15	23.70	1.55
EW-95	15.80	7.45	9.30	1.85
EW-96	14.20	6.50	6.50	0.00
EW-97	33.60	28.30	28.30	0.00
EW-98	37.30	34.40	34.40	0.00
EW-99	32.60	25.35	25.50	0.15
EW-100	28.70	21.25	21.30	0.05
EW-101	28.70	22.00	22.10	0.10
EW-102	28.90	21.35	21.60	0.25
EW-103	17.30	10.30	12.50	2.20
EW-104	13.70	6.55	6.55	0.00
EW-105	14.10	5.90	8.70	2.80
EW-106	13.60	6.50	6.70	0.20
EW-107	34.70	32.45	32.45	0.00
EW-108	26.00	24.50	24.50	0.00
EW-109	27.90	21.30	21.40	0.10
EW-110	26.00	21.40	21.60	0.20
EW-111	30.60	23.20	24.80	1.60
EW-112	18.40	10.50	14.40	3.90
EW-113	15.00	8.65	8.65	0.00
EW-114	12.90	7.85	7.85	0.00
EW-115	24.80	21.60	22.85	1.25
EW-116	25.60	22.05	22.80	0.75
EW-117	24.50	21.00	21.40	0.40
EW-118	30.10	22.10	23.30	1.20
EW-119	19.00	11.60	11.65	0.05
EW-120	18.60	11.65	11.65	0.00
EW-121	12.90	6.60	6.60	0.00
EW-122	25.50	21.96	22.10	0.14
EW-123	16.20	13.60	13.65	0.05

TABLE 1 (cont.)
OIL THICKNESS MONITORING AUGUST 2006
TECHNICAL MEMORANDUM
BEEDE WASTE OIL SITE
PLAISTOW, NEW HAMPSHIRE

Extraction Well ID	Total Well Depth (ft)	Depth to Oil (ft)	Depth to Water (ft)	Oil Thickness (ft)
	Date: 08/02/2006			
EW-124	18.70	12.80	12.82	0.02
EW-125	26.90	20.90	23.80	2.90
EW-126	21.80	16.70	16.90	0.20
EW-127	20.00	12.55	14.60	2.05
EW-128	13.00	7.20	9.90	2.70
EW-129	16.70	14.00	14.00	0.00
EW-130	15.50	11.85	12.80	0.95
EW-131	14.90	11.50	11.60	0.10
EW-132	25.90	19.15	19.80	0.65
EW-133	22.60	15.40	16.20	0.80
EW-134	22.80	15.90	15.90	0.00
EW-135	14.70	9.70	13.60	3.90
EW-136	12.80	xxxxxxx	xxxxxxxxx	xxxxxxxxxx
EW-137	17.00	12.10	12.90	0.80
EW-138	26.10	20.51	21.70	1.19
EW-139	24.00	17.90	17.90	0.00
EW-140	22.60	16.70	16.70	0.00
EW-141	21.70	15.40	15.40	0.00
EW-142	19.90	14.10	14.10	0.00
EW-143	14.20	xxxxxxx	xxxxxxxxx	xxxxxxxxxx

xxxxxxx = no readings - well removed during trench extension.

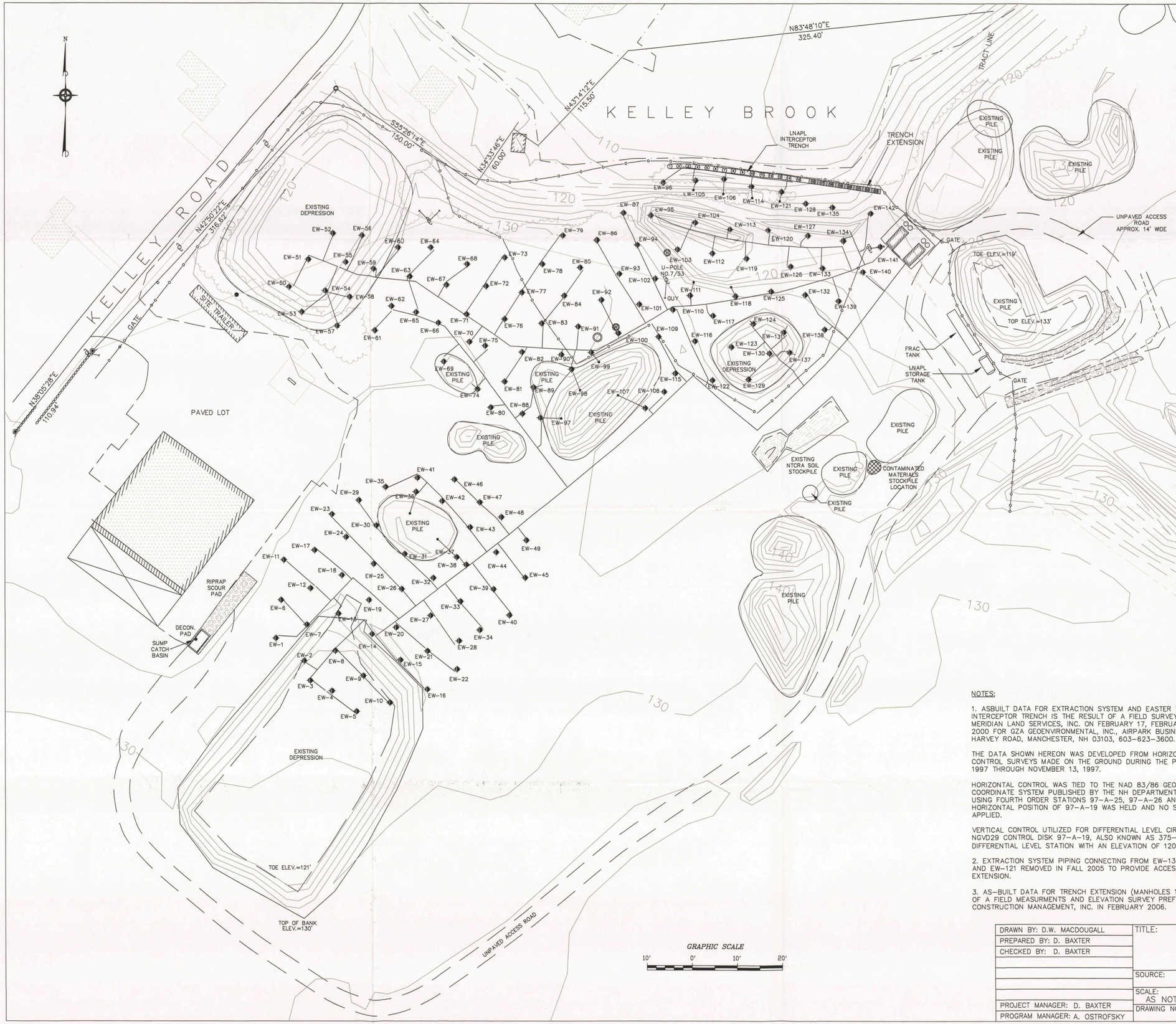
FIGURES

FIGURES

LNAPL INTERCEPTOR TRENCH EXTENSION - JANUARY 2006
AS BUILT ELEVATIONS*
BEEDE WASTE OIL SITE, PLAISTOW, NH

Manhole Number	Base of Trench Elevation (ft)	Top of Galley Elevation (ft)	Manhole Rim Elevation (ft)
16	105.56	109.56	110.81
17	105.52	109.52	110.80
18	105.52	109.52	111.72
19	105.52	109.52	111.72
20	105.48	109.48	112.66
21	105.48	109.48	114.65
22	105.48	109.48	115.66
23	105.48	109.48	117.66

* Elevations relative to NGVD 1929 Vertical Datum



NOTES:

1. ASBUILT DATA FOR EXTRACTION SYSTEM AND EASTER 124 FEET LENGTH OF INTERCEPTOR TRENCH IS THE RESULT OF A FIELD SURVEY PERFORMED BY MERIDIAN LAND SERVICES, INC. ON FEBRUARY 17, FEBRUARY 23 AND APRIL 27, 2000 FOR GZA GEOENVIRONMENTAL, INC., AIRPARK BUSINESS CENTER, 380 HARVEY ROAD, MANCHESTER, NH 03103, 603-623-3600.

THE DATA SHOWN HEREON WAS DEVELOPED FROM HORIZONTAL AND VERTICAL CONTROL SURVEYS MADE ON THE GROUND DURING THE PERIOD OF OCTOBER 29, 1997 THROUGH NOVEMBER 13, 1997.

HORIZONTAL CONTROL WAS TIED TO THE NAD 83/86 GEODETIC CONTROL COORDINATE SYSTEM PUBLISHED BY THE NH DEPARTMENT OF TRANSPORTATION USING FOURTH ORDER STATIONS 97-A-25, 97-A-26 AND 97-A-19. THE HORIZONTAL POSITION OF 97-A-19 WAS HELD AND NO SCALE FACTOR WAS APPLIED.

VERTICAL CONTROL UTILIZED FOR DIFFERENTIAL LEVEL CIRCUITS WAS BASED ON NGVD29 CONTROL DISK 97-A-19, ALSO KNOWN AS 375-0050, A THIRD ORDER DIFFERENTIAL LEVEL STATION WITH AN ELEVATION OF 120.60'.

2. EXTRACTION SYSTEM PIPING CONNECTING FROM EW-134 TO EW-135, EW-128 AND EW-121 REMOVED IN FALL 2005 TO PROVIDE ACCESS FOR TRENCH EXTENSION.

3. AS-BUILT DATA FOR TRENCH EXTENSION (MANHOLES 16-23) IS THE RESULT OF A FIELD MEASURMENTS AND ELEVATION SURVEY PREFORMED BY MAVERICK CONSTRUCTION MANAGEMENT, INC. IN FEBRUARY 2006.

LEGEND

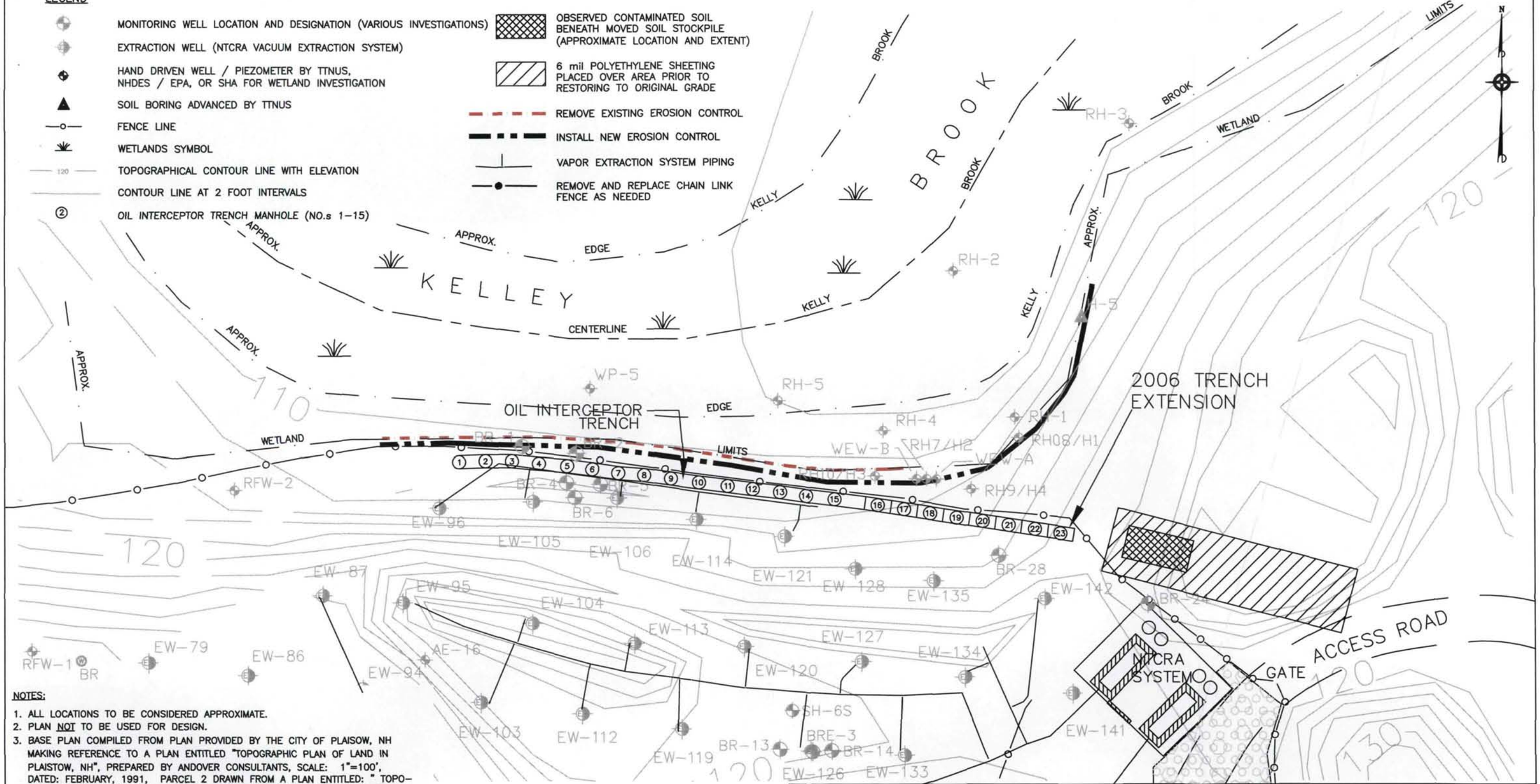
- EXTRACTION SYSTEM PIPING (ABOVE GROUND)
- EW-142 — ASBUILT EXTRACTION WELL W/ IDENTIFIER
- EW-99 — EXTRACTION WELL INSTALLED AT AN ANGLE
  - SURVEYED LOCATION OF TOP OF WELL
  - APPROXIMATE LOCATION OF BOTTOM OF WELL BASED ON PROPOSED DESIGN DRILL LOCATION.
- U-POLE NO.7/53 / GUY — UTILITY POLE WITH IDENTIFIER; GUY WIRE
- EXISTING WELL
- CONCRETE STRUCTURE FOUND DURING CONSTRUCT.
- INTERCEPTOR TRENCH MANHOLE

DRAWN BY: D.W. MACDOUGALL	TITLE: SITE PLAN BEEDE WASTE OIL SITE PLAISTOW, NEW HAMPSHIRE		
PREPARED BY: D. BAXTER			
CHECKED BY: D. BAXTER	SOURCE: BASE PLAN BY SEE NOTES		
	SCALE: AS NOTED	DATE: AUGUST 25, 2006	PROJ. NO: 4103
PROJECT MANAGER: D. BAXTER	DRAWING NO: 1	ACFILE NAME: \4103\0800\SITE.DWG	REV: 0
PROGRAM MANAGER: A. OSTROFSKY			

TETRA TECH NUS, INC.
55 JONSPIN ROAD
WILMINGTON, MASSACHUSETTS 01887
(978)658-7899

LEGEND

- MONITORING WELL LOCATION AND DESIGNATION (VARIOUS INVESTIGATIONS)
- EXTRACTION WELL (NTCRA VACUUM EXTRACTION SYSTEM)
- HAND DRIVEN WELL / PIEZOMETER BY TTNUS, NHDES / EPA, OR SHA FOR WETLAND INVESTIGATION
- SOIL BORING ADVANCED BY TTNUS
- FENCE LINE
- WETLANDS SYMBOL
- 120 — TOPOGRAPHICAL CONTOUR LINE WITH ELEVATION
- CONTOUR LINE AT 2 FOOT INTERVALS
- ② OIL INTERCEPTOR TRENCH MANHOLE (NO.s 1–15)
- OBSERVED CONTAMINATED SOIL BENEATH MOVED SOIL STOCKPILE (APPROXIMATE LOCATION AND EXTENT)
- 6 mil POLYETHYLENE SHEETING PLACED OVER AREA PRIOR TO RESTORING TO ORIGINAL GRADE
- REMOVE EXISTING EROSION CONTROL
- INSTALL NEW EROSION CONTROL
- VAPOR EXTRACTION SYSTEM PIPING
- REMOVE AND REPLACE CHAIN LINK FENCE AS NEEDED



NOTES:

1. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
2. PLAN NOT TO BE USED FOR DESIGN.
3. BASE PLAN COMPILED FROM PLAN PROVIDED BY THE CITY OF PLAISOW, NH MAKING REFERENCE TO A PLAN ENTITLED "TOPOGRAPHIC PLAN OF LAND IN PLAISTOW, NH", PREPARED BY ANDOVER CONSULTANTS, SCALE: 1"=100', DATED: FEBRUARY, 1991, PARCEL 2 DRAWN FROM A PLAN ENTITLED: " TOPO-GRAPHIC WORKSHEET OF A PARCEL IN PLAISTOW, NH" PREPARED BY EASTERN TOPOGRAPHICS, SCALE: 1"=40', DATED: JANUARY, 1990 AND A PLAN LABELLED: "U.S. ARMY CORPS OF ENGINEERS, U.S. ENVIRONMENTAL PROTECTION AGENCY, SITE NAME: BEEDE WASTE OIL, CITY NAME: PLAISTOW, NH, ... PROJECT NO. 1NH4251030710612, DATE OF PHOTOGRAPHY: MAY 07, 1996, DATE OF PREPARATION: FEBRUARY 1997, SCALE: 1"=300', CONTOUR INTERVAL: 2'.
4. LOCATIONS INDICATED BY ◆ OR ▲ WERE SURVEYED BY TTNUS ON JUNE 3, 2005 USING GPS (SUB-METER ACCURACY).

GRAPHIC SCALE

0' 30' 60'

TRENCH AREA DETAILS

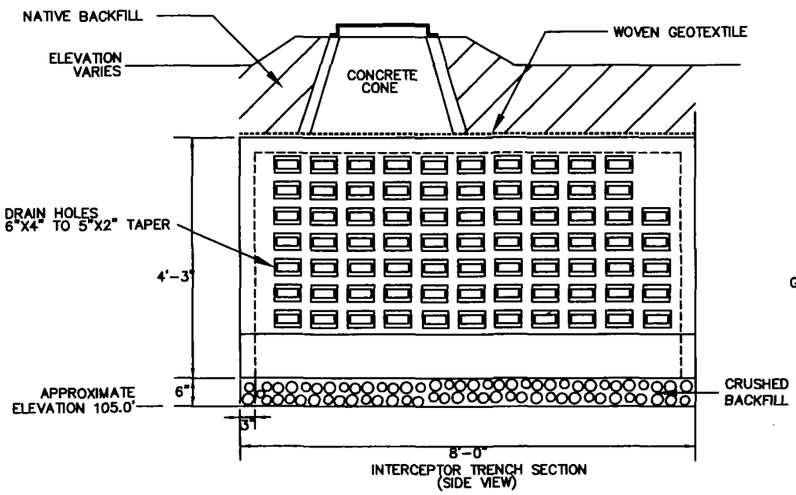
BEEDE WASTE OIL COMPANY SITE

PLAISTOW, NEW HANPSHIRE

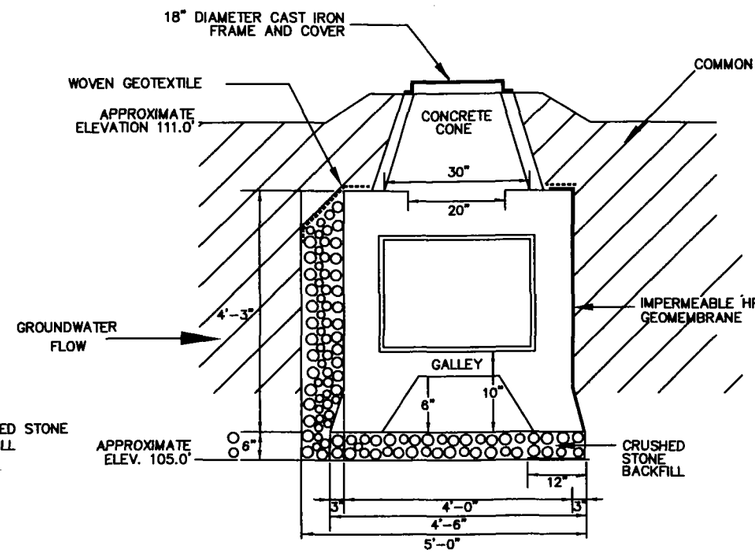
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	D. BAXTER	DATE:	AUGUST 25, 2006
SCALE:	AS NOTED	FILE NO.:	DWG\4103\0800\SITE_PREP.DWG

FIGURE 2

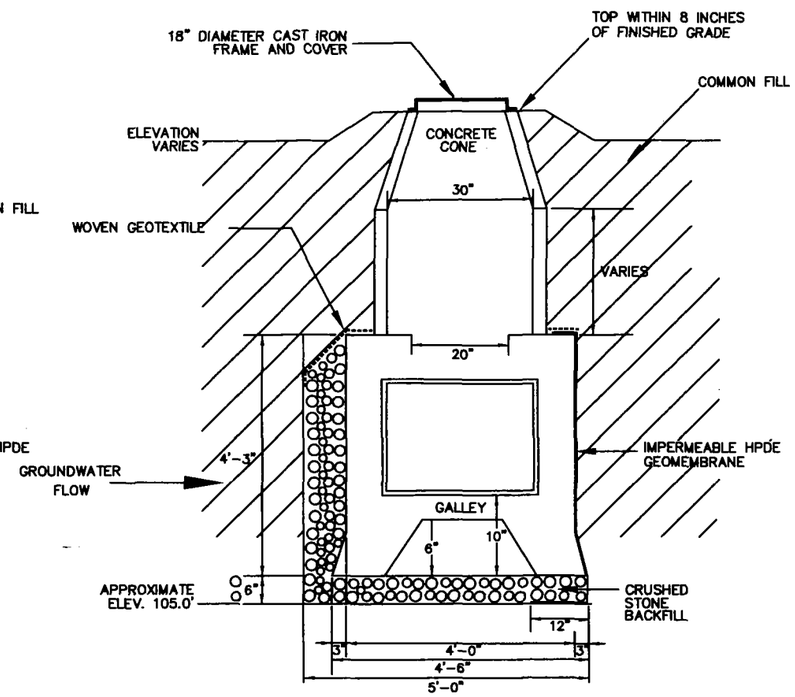
TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899



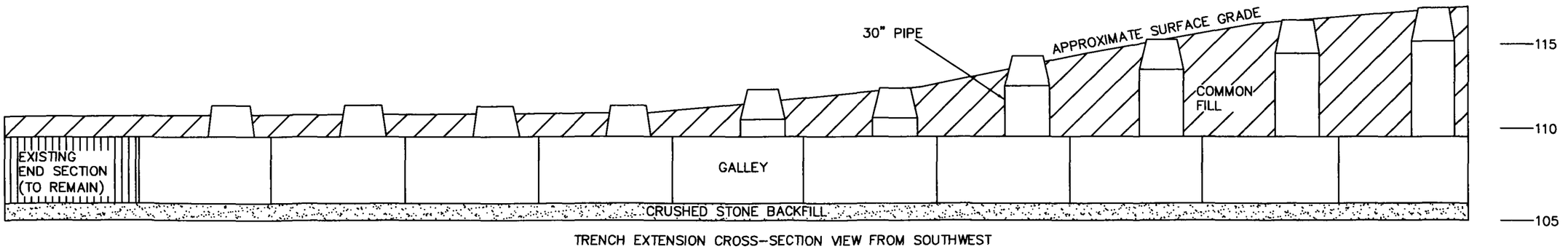
INTERCEPTOR TRENCH SECTION (SIDE VIEW)



INTERCEPTOR TRENCH WITH CONICAL TOP (FRONT VIEW)



INTERCEPTOR TRENCH WITH RISER SECTION (FRONT VIEW)



TRENCH EXTENSION CROSS-SECTION VIEW FROM SOUTHWEST

GRAPHIC SCALE

0' 10' 20'

OIL INTERCEPTOR TRENCH EXTENSION DETAILS			
BEEDE WASTE OIL SITE			
PLAISTOW, NEW HAMPSHIRE			
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	D. BAXTER	DATE:	AUGUST 24, 2006
SCALE:	AS NOTED	FILE NO.:	\4103\0800\CROSS_SECTION.DWG

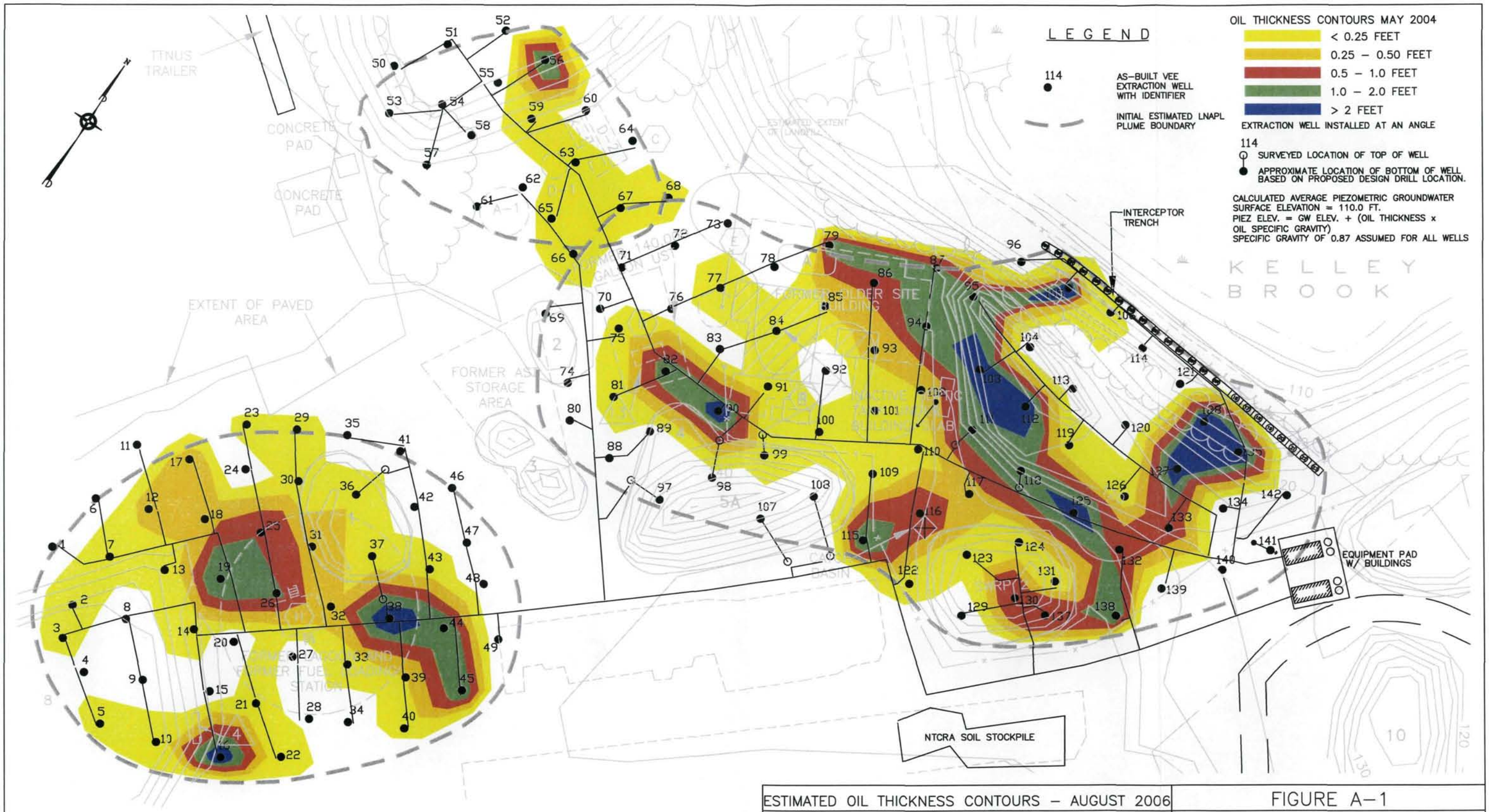
FIGURE 3

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899

APPENDIX A

APPENDIX A

ESTIMATED OIL THICKNESS CONTOURS - AUGUST 2006



NOTES:

1. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
2. PLAN NOT TO BE USED FOR DESIGN.

GRAPHIC SCALE

0′ 50′ 100′

ESTIMATED OIL THICKNESS CONTOURS – AUGUST 2006			FIGURE A–1
NON–TIME CRITICAL REMOVAL ACTION			
BEEDE WASTE OIL SITE – PLAISTOW, NEW HAMPSHIRE			
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	D. BAXTER	DATE:	AUGUST 25, 2006
SCALE:	AS NOTED	FILE NO.:	DWG\4103\0800\0806.DWG

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658–7899

APPENDIX B

APPENDIX B
NTCRA OPERATIONS AND MAINTENANCE RESOURCES

BEEDE WASTE OIL SITE
PLAISTOW, NEW HAMPSHIRE
NTCRA SERVICE PROVIDERS USED BY TTNUS

ACTIVITY/SERVICE	VENDOR/CONTACT	COMMENTS
Snow plowing and sanding & weed clearing	REP Landscaping 213 Main Street Plaistow, NH 03865 (603) 382-3900	Snow plowing as needed in winter. Weed clearing as needed in growing season, estimated 2-3 times per season if extraction system remains shut down.
Activated carbon regeneration	Envirotrol, Inc. P.O. Box 61 Sewickley, PA 15143-0061 (412)741-2030 Contact: Sandy Wrublesky	Units picked up and brought off site for regeneration. Off-road fork lift needed to move carbon units to parking area and load onto truck. Fork lift available for rental at MB Tractor on Rt 125.)
Vacuum extraction system equipment maintenance	SCG Industries Unlimited 250 King William Road Spruce Lake Industrial Park Saint John, NB E2M5Y5 Canada (506) 674-1081 Contacts:Dale Chambers/Mike Campbell	Annual maintenance/as needed repairs (may not need annual maint during shut down. Maintenance was performed at start of shut down period (October 2005).
Electrician	Ozz-E Electrical Service, Inc. 726 East Industrial Park Drive Unit 7 Manchester, NH 03109 (603) 625-1812	Electrical systems trouble-shooting and repair.
Waste disposal	Mill City Environmental Services 116 John Street Lowell, MA 01852 (978) 654-6741 Contact: Brian Chapman	Vacuum truck service (mixed oil and water from settling basin) may evantually be needed if interceptor trench maintained with extraction system.
Trailer alarm monitoring	Capitol Alarm Services 37 Washington Street Penacook, NH 03303 (603)753-4004	

BEEDE WASTE OIL SITE

NON-TIME CRITICAL REMOVAL ACTION

REPRESENTATIVE WASTE CHARACTERIZATION RESULTS

LABORATORY ANALYSIS FOR OFF SITE DISPOSAL

EXTRACTED WATER

EXTRACTED OIL

OILY SOLIDS (PPE, absorbent waste, etc)

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2005

FOR: Attn: J. Norton
Mill City Environmental
116 John St.
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		10/20/05	10:15
Location Code:	MILLCITY	Received by:	LB	10/20/05	17:15
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	MC6027A2				

SDG I.D.: GAG77457
Phoenix I.D.: AG77458

Laboratory Data

Client ID: BEEDE WASTE BW-W

Parameter	Result	RL	Units	Date	Time	By	Reference
PCB Extraction	Completed			10/21/05		M/A/L	SW3510/3520
Polychlorinated Biphenyls							
PCB-1016	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1221	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1232	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1242	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1248	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1254	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1260	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1262	ND	0.5	ug/L	10/24/05		MH	608/ 8082
PCB-1268	ND	0.5	ug/L	10/24/05		MH	608/ 8082
QA/QC Surrogates							
% DCBP (Surrogate Rec)	36		%	10/24/05		MH	608/ 8082
% TCMX (Surrogate Rec)	88		%	10/24/05		MH	608/ 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
October 26, 2005

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
March 14, 2005

FOR: Attn: J Norton
Mill City Environmental
100 Foot of John St 4th Floor
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		03/07/05	11:30
Location Code:	MILLCITY	Received by:	SW	03/08/05	15:30
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	MCE027N				

SDG I.D.: GAG25744
Phoenix I.D.: AG25744

Laboratory Data

Client ID: BEEDE WASTE OIL BW-1

Parameter	Result	RL	Units	Date	Time	By	Reference
PCB Extraction	Completed			03/08/05		M/L	SW3510/3520
Polychlorinated Biphenyls							
PCB-1016	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1221	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1232	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1242	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1248	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1254	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1260	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1262	ND	0.5	ug/L	03/10/05		JH	608/ 8082
PCB-1268	ND	0.5	ug/L	03/10/05		JH	608/ 8082
QA/QC Surrogates							
% DCBP (Surrogate Rec)	41		%	03/10/05		JH	608/ 8082
% TCMX (Surrogate Rec)	37		%	03/10/05		JH	608/ 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
March 14, 2005

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

March 14, 2005

QA/QC Data

SDG I.D.: GAG25744

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD
QA/QC Batch Sample No: AG23100 (AG25744)					
Chlorinated Herbicides					
2,4,5-T	ND	80	88	100	12.8
2,4,5-TP (Silvex)	ND	108	96	100	4.1
2,4-D	ND	92	74	104	33.7
2,4-DB	ND	96	88	92	4.4
Dalapon	ND				
Dicamba	ND	112	95	103	8.1
Dichloroprop	ND	92	76	88	14.6
Dinoseb	ND	94	55	62	12.0
% DCAA (Surrogate Rec)	113	84	79	78	1.3
QA/QC Batch Sample No: AG23100 (AG25744)					
Pesticides - Aqueous					
4,4' -DDD	ND	95	109	101	7.6
4,4' -DDE	ND	86	102	102	0.0
4,4' -DDT	ND	88	99	94	5.2
a-BHC	ND	96	89	92	3.3
Aldrin	ND	109	105	101	3.9
b-BHC	ND	89	100	99	1.0
Chlordane	ND				
d-BHC	ND	89	109	116	6.2
Dieldrin	ND	105	105	104	1.0
Endosulfan I	ND				
Endosulfan II	ND				
Endosulfan Sulfate	ND	80	101	100	1.0
Endrin	ND	102	99	100	1.0
Endrin Aldehyde	ND				
g-BHC (Lindane)	ND	106	98	94	4.2
Heptachlor	ND	105	107	115	7.2
Heptachlor epoxide	ND	108	107	106	0.9
Methoxychlor	ND				
Toxaphene	ND				
QA/QC Batch Sample No: AG23100 (AG25744)					
Polychlorinated Biphenyls					

QA/QC Data

SDG I.D.: GAG25744

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD
PCB-1016	ND	101	105	111	5.6
PCB-1221	ND				
PCB-1232	ND				
PCB-1242	ND				
PCB-1248	ND				
PCB-1254	ND				
PCB-1260	ND	98	104	117	11.8
PCB-1262	ND				
PCB-1268	ND				
% DCBP (Surrogate Rec)	75	35	74	96	25.9
% TCMX (Surrogate Rec)	95	88	94	97	3.1

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
RPD - Relative Percent Difference
LCS - Laboratory Control Sample

Phyllis Shiller

Phyllis Shiller, Laboratory Director
March 14, 2005

PHOENIX

ACCREDITED IN ACCORDANCE WITH

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

December 14, 2004

FOR: Attn: Mr. Brian Chapman
Mill City Environmental
100 Foot of John St 4th Floor
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		12/07/04	13:15
Location Code:	MILLCITY	Received by:	DL	12/08/04	17:15
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	MCE-027M				

SDG I.D.: GAG07609
Phoenix I.D.: AG07609

Laboratory Data

Client ID: BEEDE WASTE OIL MCE027M-WATER

Parameter	Result	RL	Units	Date	Time	By	Reference
PCB Extraction	Completed			12/09/04		M/S	SW3510/3520
Polychlorinated Biphenyls							
PCB-1016	ND	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1221	ND	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1232	ND	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1242	ND	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1248	ND	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1254	ND	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1260	1.5	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1262	ND	0.5	ug/L	12/13/04		JH	608/ 8082
PCB-1268	ND	0.5	ug/L	12/13/04		JH	608/ 8082
QA/QC Surrogates							
% DCBP (Surrogate Rec)	71		%	12/13/04		JH	608/ 8082
% TCMX (Surrogate Rec)	62		%	12/13/04		JH	608/ 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
December 14, 2004

PHOENIX

ACCREDITED IN ACCORDANCE WITH NELAC

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

December 14, 2004

QA/QC Data

SDG I.D.: GAG07609

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD
QA/QC Batch Sample No: AG07059 (AG07609)					
Polychlorinated Biphenyls					
PCB-1016	ND				
PCB-1221	ND				
PCB-1232	ND				
PCB-1242	ND				
PCB-1248	ND				
PCB-1254	ND				
PCB-1260	ND		97	101	4.0
PCB-1262	ND				
PCB-1268	ND				
% DCBP (Surrogate Rec)	67		53	49	7.8
% TCMX (Surrogate Rec)	91		92	96	4.3

Comment: A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
RPD - Relative Percent Difference
LCS - Laboratory Control Sample

Phyllis Shiller

Phyllis Shiller, Laboratory Director
December 14, 2004

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P O Box 370, Manchester, CT 06040
Tel (860) 645-1102 Fax (860) 645 0823

Draft Progress Report

December 01, 2005

FOR: Attn: Mr. Jack Rourke
Mill City Environmental
116 John St.
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	OIL	Collected by:		11/29/05	12:15
Location Code:	MILLCITY	Received by:	SW	11/30/05	16:15
Rush Request:	RUSH	Analyzed by:	See "By" Below		
P.O.#:	MCE 027A				

SDG I.D.: GAG86433
Phoenix I.D.: AG86433

Laboratory Data

Client ID: BEEDE OIL OIL #1

Parameter	Result	RL	Units	Date	Time	By	Reference
Waste Dilution	Completed		NA	12/01/05		D	SW3580
Polychlorinated Biphenyls							
PCB-1016	ND	10	mg/kg	12/01/05		MH	SW 8082
PCB-1221	ND	10	mg/kg	12/01/05		MH	SW 8082
PCB-1232	ND	10	mg/kg	12/01/05		MH	SW 8082
PCB-1242	ND	10	mg/kg	12/01/05		MH	SW 8082
PCB-1248	ND	10	mg/kg	12/01/05		MH	SW 8082
PCB-1254	ND	10	mg/kg	12/01/05		MH	SW 8082
PCB-1260	22	10	mg/kg	12/01/05		MH	SW 8082
PCB-1262	ND	10	mg/kg	12/01/05		MH	SW 8082
PCB-1268	ND	10	mg/kg	12/01/05		MH	SW 8082
QA/QC Surrogates							
%DCBP (Surrogate Rec)	131		%	12/01/05		MH	SW 8082
%TCMX (Surrogate Rec)	60		%	12/01/05		MH	SW 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

PLEASE NOTE: THIS PROGRESS REPORT IS CONSIDERED PRELIMINARY DATA. THE RESULTS ENTERED HAVE NOT BEEN EXAMINED BY OUR QA/QC DEPARTMENT.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Draft Progress Report

January 20, 2006

FOR: Attn: Mr. Jack Rourke
Mill City Environmental
116 John St.
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	OIL	Collected by:	JR	01/11/06	8:50
Location Code:	MILLCITY	Received by:	LB	01/11/06	17:15
Rush Request:		Analyzed by:	See "By" Below		
P.O.#:					

SDG I.D.: GAG94775
Phoenix I.D.: AG94775

Laboratory Data

Client ID: BEEDE OIL PH-1

Parameter	Result		RL	Units	Date	Time	By	Reference
TCLP Silver	0.034	5	0.01	mg/L	01/13/06		EK	E1311/SW6010
TCLP Arsenic	< 0.01	5	0.01	mg/L	01/13/06		EK	E1311/SW6010
TCLP Barium	0.296	100	0.01	mg/L	01/13/06		EK	E1311/SW6010
TCLP Cadmium	< 0.005	1	0.005	mg/L	01/13/06		EK	E1311/SW6010
TCLP Chromium	< 0.01	5	0.01	mg/L	01/13/06		EK	E1311/SW6010
TCLP Lead	< 0.015	5	0.015	mg/L	01/13/06		EK	E1311/SW6010
TCLP Selenium	< 0.05	1	0.05	mg/L	01/13/06		EK	E1311/SW6010
TCLP Mercury	< 0.001	.2	0.001	mg/L	01/12/06		RS	E1311/E245.1
TCLP Digestion Mercury	Completed				01/12/06		E	E1311/7470
TCLP Extraction for Metals	Completed				01/11/06		E	EPA 1311
TCLP Extraction for Organics	Completed				01/11/06		PL	1311
TCLP Semi-Volatile Extraction	Completed				01/12/06		M/K/D	SW3510/3520
TCLP Extraction Volatiles	Completed				01/11/06		E	EPA 1311
TCLP Metals Digestion	Completed				01/12/06		E	SW846 - 3005
TCLP Volatiles								
1,1-Dichloroethylene	ND		50	ug/L	01/13/06		RM	SW 8260
1,2 Dichloroethane	ND		50	ug/L	01/13/06		RM	SW 8260
Benzene	ND		50	ug/L	01/13/06		RM	SW 8260
Carbon tetrachloride	ND		50	ug/L	01/13/06		RM	SW 8260
Chlorobenzene	ND		50	ug/L	01/13/06		RM	SW 8260
Chloroform	ND		50	ug/L	01/13/06		RM	SW 8260
Methyl ethyl ketone	ND		50	ug/L	01/13/06		RM	SW 8260
Tetrachloroethene	ND		50	ug/L	01/13/06		RM	SW 8260

Client ID: BEEDE OIL PH-1 Phoenix I.D.: AG94775

Parameter	Result	RL	Units	Date	Time	By	Reference
Trichloroethene	ND	50	ug/L	01/13/06		RM	SW 8260
Vinyl chloride	ND	50	ug/L	01/13/06		RM	SW 8260
QA/QC Surrogates							
%4 Bromofluorobenzene (Surrogate)	83		%	01/13/06		RM	SW 8260
TCLP Acid/Base-Neutral							
1,4-Dichlorobenzene	ND	100	ug/L	01/13/06		KCA	SW 8270
2,4,5-Trichlorophenol	ND	100	ug/L	01/13/06		KCA	SW 8270
2,4,6 Trichlorophenol	ND	100	ug/L	01/13/06		KCA	SW 8270
2,4-Dinitrotoluene	ND	100	ug/L	01/13/06		KCA	SW 8270
2-Methylphenol (o-cresol)	ND	100	ug/L	01/13/06		KCA	SW 8270
3&4-Methylphenol (m&p-Cresol)	ND	100	ug/L	01/13/06		KCA	SW 8270
Hexachlorobenzene	ND	100	ug/L	01/13/06		KCA	SW 8270
Hexachlorobutadiene	ND	100	ug/L	01/13/06		KCA	SW 8270
Hexachloroethane	ND	100	ug/L	01/13/06		KCA	SW 8270
Nitrobenzene	110	100	ug/L	01/13/06		KCA	SW 8270
Pentachlorophenol	ND	500	ug/L	01/13/06		KCA	SW 8270
Pyridine	ND	100	ug/L	01/13/06		KCA	SW 8270
QA/QC Surrogates							
% 2,4,6-Tribromophenol	109		%	01/13/06		KCA	SW 8270
% 2-Fluorobiphenyl	134		%	01/13/06		KCA	SW 8270
% 2-Fluorophenol	23		%	01/13/06		KCA	SW 8270
% Nitrobenzene-d5	136		%	01/13/06		KCA	SW 8270
% Phenol-d5	26		%	01/13/06		KCA	SW 8270
% Terphenyl-d14	107		%	01/13/06		KCA	SW 8270

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

PLEASE NOTE: THIS PROGRESS REPORT IS CONSIDERED PRELIMINARY DATA. THE RESULTS ENTERED HAVE NOT BEEN EXAMINED BY OUR QA/QC DEPARTMENT.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
October 26, 2005

FOR: Attn: J. Norton
Mill City Environmental
116 John St.
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	OIL	Collected by:		10/20/05	10:15
Location Code:	MILLCITY	Received by:	LB	10/20/05	17:15
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	MC6027A2				

SDG I.D.: GAG77457
Phoenix I.D.: AG77457

Laboratory Data

Client ID: BEEDE WASTE BW-O

Parameter	Result		RL	Units	Date	Time	By	Reference
Waste Dilution	Completed			NA	10/20/05		S	SW3580
Polychlorinated Biphenyls								
PCB-1016	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1221	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1232	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1242	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1248	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1254	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1260	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1262	ND	*	10	mg/kg	10/24/05		MH	SW 8082
PCB-1268	ND	*	10	mg/kg	10/24/05		MH	SW 8082
QA/QC Surrogates								
%DCBP (Surrogate Rec)	44			%	10/24/05		MH	SW 8082
%TCMX (Surrogate Rec)	76			%	10/24/05		MH	SW 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

* Due to matrix interference in the sample an elevated MDL was reported.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
October 26, 2005

PHOENIX

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Draft Progress Report

November 15, 2004

FOR: Attn: Mr. Brian Chapman
Mill City Environmental
100 Foot of John St 4th Floor
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	OIL	Collected by:	SS	11/11/04	8:00
Location Code:	MILLCITY	Received by:	KJB	11/11/04	15:10
Rush Request:	RUSH24HR	Analyzed by:	see "By" below		
P.O.#:	MCE0278				

SDG I.D.: GAG01546
Phoenix I.D.: AG01546

Laboratory Data

Client ID: BEEDE WASTE OIL WHITE OIL TANK

Parameter	Result		RL	Units	Date	Time	By	Reference
Waste Dilution	Completed		NA	NA	11/12/04		Y	SW3580
Polychlorinated Biphenyls								
PCB-1016	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1221	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1232	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1242	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1248	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1254	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1260	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1262	ND	*	10	mg/kg	11/15/04		JH	SW 8082
PCB-1268	ND	*	10	mg/kg	11/15/04		JH	SW 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

*Elevated reporting limits due to sample matrix.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

PLEASE NOTE: THIS PROGRESS REPORT IS CONSIDERED PRELIMINARY DATA. THE RESULTS ENTERED HAVE NOT BEEN EXAMINED BY OUR QA/QC DEPARTMENT.

Solid Oily Debris - absorbents, used pipes, etc.

PHOENIX

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Draft Progress Report

December 02, 2005

FOR: Attn: Mr. Jack Rourke
Mill City Environmental
116 John St.
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	SOLID	Collected by:		11/29/05	12:20
Location Code:	MILLCITY	Received by:	SW	11/30/05	16:15
Rush Request:	RUSH	Analyzed by:	See "By" Below		
P.O.#:	MCE 027A				

SDG I.D.: GAG86433
Phoenix I.D.: AG86434

Laboratory Data

Client ID: BEEDE OIL PIPE #1

Parameter	Result	RL	Units	Date	Time	By	Reference
Bulk Size Reduction	Completed			12/01/05		KF	P.E.L.
Soil Extraction for PCB	Completed			12/02/05		D	3545/3550
Polychlorinated Biphenyls							
PCB-1016	410	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1221	ND	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1232	ND	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1242	ND	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1248	ND	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1254	ND	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1260	1200	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1262	ND	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1268	ND	400	ug/Kg	12/02/05		MH	SW 8082
QA/QC Surrogates							
% DCBP (Surrogate Rec)	107		%	12/02/05		MH	SW 8082
% TCMX (Surrogate Rec)	77		%	12/02/05		MH	SW 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

Sample consists of a hollow plastic tube approximately 21cm by 6 cm, with duck tape and labels on both the outside and both ends. The sample was not in a bag and any oil on the outside of the container may have been lost.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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PHOENIX

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Draft Progress Report

December 02, 2005

FOR: Attn: Mr. Jack Rourke
Mill City Environmental
116 John St.
Lowell, MA 01852

Sample Information		Custody Information		Date	Time
Matrix:	SOLID	Collected by:		11/29/05	0:00
Location Code:	MILLCITY	Received by:	SW	11/30/05	16:15
Rush Request:	RUSH24HR	Analyzed by:	See "By" Below		
P.O.#:	MCE-027A				

SDG I.D.: GAC86433
Phoenix I.D.: AG86618

Laboratory Data

Client ID: BEEDE OIL DUCT TAPE

Parameter	Result		RL	Units	Date	Time	By	Reference
Soil Extraction for PCB	Completed				12/02/05		D	3545/3550
Polychlorinated Biphenyls								
PCB-1016	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1221	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1232	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1242	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1248	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1254	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1260	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1262	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
PCB-1268	ND	*	400	ug/Kg	12/02/05		MH	SW 8082
QA/QC Surrogates								
% DCBP (Surrogate Rec)	41			%	12/02/05		MH	SW 8082
% TCMX (Surrogate Rec)	37			%	12/02/05		MH	SW 8082

Comments: ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

* An interference was observed during the extraction process.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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